

Primary Care Management of Infection Audit Tool User Guide

Introduction

Welcome to the national audit tool developed by the Scottish Antimicrobial Prescribing Group (SAPG) for the audit of primary care management of commonly encountered infections. The tool is intended to provide prescribers with qualitative information on their prescribing of antibiotics which will complement existing quantitative information available via PRISMS.

What are the benefits to prescribers from using the audit tool?

The tool provides reports which are intended to facilitate reflective learning on individual prescribers own patterns of use of antibiotics. The reports allow prescribers to compare their own prescribing decisions with local prescribing policy. This reflection can support identification of areas for quality improvement. The tool can be used by a number of prescribers in the same practice and provides a practice level report in addition to individual prescriber reports.

With GP revalidation there is a requirement for GPs to undertake clinical audit which should illustrate how the audit has enabled the GP to reflect on their own practice and improve the quality of care. As antibiotic prescribing is generally for acute infection it is one of the few prescribing actions that can be easily attributed to an individual prescriber. The tool provides a system for the collection and analysis of data on management of commonly encountered infections and fits well with the need to provide evidence of clinical audit for revalidation.

Guidance

- Collect data on all consultations for acute infection for a minimum 2 week period.
- Data can be entered after each consultation, at the end of each day or at the end of the data collection period.
- A paper based form can be downloaded from the SAPG website to allow consultation details to be recorded for entry at a later date.
- Consultations which do not result in the issue of a prescription for an antibiotic should still be included.
- Only antibiotics for systemic use should be included.
- Anti-fungals and anti-virals should NOT be included.
- Antibiotics for prophylaxis and treatment of long term infections should NOT be included.
- When a patient presents with two or more infection sites a separate form should be completed for each infection.
- When a patient is prescribed a combination of two or more antibiotics select 'Dual Therapy'.

Main Menu

When the audit tool is opened the Main Menu appears which includes guidance on inclusion and exclusion criteria. From the Main Menu the user can: Add a New Prescriber; Add Consultation Data; Edit Consultation Data; Run Reports and Exit the Audit Tool. There is also a link to the SAPG website.

Scottish Antimicrobial Prescribing Group www.scottishmedicines.org.uk/SAPG

Primary Care Management of Infection Audit Tool

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Guidance

Collect data on all consultations for acute infection for a minimum 2 week period
Data can be entered after each consultation, at the end of each day or at the end of the data collection period
A paper based form can be downloaded from the SAPG website to allow consultation details to be recorded for entry at a later date
Consultations which do not result in the issue of a prescription for an antibiotic should still be included
Only antibiotics for systemic use should be included in the audit
Antifungals and antivirals should NOT be included in the audit
Antibiotics for prophylaxis and treatment of long term infections should NOT be included
Where a patient presents with two or more possible infection sites, a separate form should be completed for each
Where a patient is prescribed a combination of two or more antibiotics for a single infection 'Dual Therapy' should be selected

1 Add New Prescriber

Before entering data the prescriber must add their name to the database.

Click 'Add New Prescriber' button on the Main Menu. The following form will appear.

New Prescriber Form

Enter the Prescriber's Name and click 'Save Prescriber Name'

New Prescriber Name

Save Prescriber Name

Then Click 'Close Form' to return to Main Menu

Close Form

- Enter the prescriber's name in the text box.
- Click 'Save Prescriber Name'
- The form closes automatically
- To close the form without adding a new prescriber, click 'Close Form'

2 Add Consultation Data

To add data click 'Add Consultation Data' button on the Main Menu. The following form will appear.

Add Consultation Data [X] **Close Form**

Add consultation data to the fields below.

If an antibiotic is not prescribed then Duration of Treatment, Delayed Prescription, Indication for Treatment and Prescribing Method do not have to be completed.

Database ID [AutoNumber] Consultation Date [Date Picker]

Prescriber Name [Dropdown] Patient Age [Dropdown]

Infection Type [Dropdown]

Antibiotic [Dropdown]

Duration of Treatment [Dropdown] Delayed Prescription [No] [Dropdown]

Indication for Treatment [Dropdown]

Prescribing Method [Dropdown]

[Previous Record] [Next Record] [Delete Record] [Save Record]

Note: Database ID is an automatically generated number so this field does not have to be completed but should be added to the data collection form to enable prescribers to review the individual patient record as part of the process of reflection at the end of the audit.

- Add Consultation Date using the date picker
- Select Prescriber Name from the drop down menu
- Select the Patient's Age group from the drop down menu
- Select the Infection Type from the drop down menu

(a) If an antibiotic was not prescribed during the consultation:

- Select Antibiotic as 'No antimicrobial prescribed - symptomatic relief / self care advice'.
- Further data fields are removed from the screen as shown below
- Data entry is complete
- Click 'Save Record' button
- Screen ready for next consultation

The screenshot shows a web form titled 'Add Consultation Data'. At the top right, there is a red 'X' icon in a box and a yellow button labeled 'Close Data Entry Screen' with an arrow pointing to the red 'X' box. Below the title, there is a note: 'Add consultation data to the fields below.' and a longer note: 'If an antibiotic is not prescribed then Duration of Treatment, Delayed Prescription, Indication for Treatment and Prescribing Method do not have to be completed.' The form contains several fields: 'Database ID' (text input with '30'), 'Consultation Date' (text input with '30 June 2012'), 'Prescriber Name' (dropdown menu with 'doctor'), 'Patient Age' (dropdown menu with '0-4 years'), 'Infection Type' (dropdown menu with 'Acute Cough / Bronchitis'), and 'Antibiotic' (dropdown menu with 'No antimicrobial prescribed - symptomatic relief / self care advice'). At the bottom of the form, there are four buttons: 'Previous Record' (with a left arrow icon), 'Next Record' (with a right arrow icon), 'Delete Record' (with an 'X' icon), and 'Save Record' (with a floppy disk icon). Arrows point from each of these four buttons to their respective icons on the form.

(b) If an antibiotic was prescribed during the consultation:

- Select Antibiotic from the drop down menu
- If a dual prescription has been issued select 'Dual Therapy'.
- Select Duration of Treatment from the drop down menu
- Indicate if a Delayed Prescription was issued (default is No)
- Select Indication for Treatment from the drop down menu
- Select Prescribing Method from the drop down menu
- Data entry is complete
- Click 'Save Record' button
- Screen ready for next consultation

When all consultations have been added, click 'Close Data Entry Screen'.

3 Editing Patient Records (During Data Entry)

A patient record can be edited or deleted during the current data entry session if a mistake is made.

Edit a Record

- If an error has been made during data entry then use the 'Previous Record' and 'Next Record' buttons to move between records.
- Edit the data within the record.
- Click 'Save Record'

Delete a Record

- Use the 'Previous Record' and 'Next Record' buttons to navigate to the record you want to delete.
- Click 'Delete Record' button.
- The record has been removed from the database.

4 Editing Patient Records (After Data Entry)

To edit a patient record click 'Edit Consultation Data' from the Main Menu. The following screen will appear:

The screenshot shows a window titled "Edit Consultation Data". Below the title is the instruction "Double Click the Database ID of the Patient Record To be Edited". There is a list box labeled "Database ID" containing the numbers "2" and "3". At the bottom, there is a text prompt "Click 'Close' to return to the main menu" and a button with a red 'X' icon. A yellow callout box labeled "Close" has an arrow pointing to the 'X' button.

Use the scroll bar to locate the Database ID of the patient record to be edited. Double click the database ID (in this example Database ID = 2). The record for patient with Database ID = 2 will appear on screen.

The screenshot shows a window titled "Edit Consultation Data" with the instruction "Edit Patient Details, then Click 'Save Edits' or Click 'Delete Record' button to remove the patient record". The form contains the following fields:

Database ID	2	Consultation Date	05 June 2012
Prescriber Name	elvis PI	Patient Age	15-29 years
Infection Type	Chronic Obstructive Pulmonary Disease Acute Exacerbation		
Antibiotic	Cefaclor		
Duration of Treatment	5 days	Delayed Prescription	No
Indication for Treatment	Empirical treatment; second or subsequent agent used		
Prescribing Method	Telephone request from patient		

At the bottom, there are two buttons: "Save Edits" (with a floppy disk icon) and "Delete Record" (with an 'X' icon). Yellow callout boxes with arrows point from the text "Save Edits" and "Delete Record" to their respective buttons.

Edit a Record

- Edit the record and after changes have been made click 'Save Edits'.
- The form will close automatically and you will be returned to the Edit Consultation Data Screen.

Delete a Record

- To delete the record, click 'Delete Record' button.
- The form will close automatically and you will be returned to the Edit Consultation Data screen.

Continue until all edits have been made. Click 'Close' to return to the Main Menu.

5 Run Reports

To produce reports click the 'Run Reports' button on the Main Menu. The following form will appear:

Reports

Tick the box for a Prescriber Level Report (default) or untick the box for a Practice Level Report.

Prescriber Level Report ☒ ?

Enter the Start Date and End Date of the Reporting Period using the date picker

Start Date End Date

For Prescriber Level Reports, select Prescriber Name

Prescriber Name

Choose Prescriber Level Report

Consultation Summary	Tables	Charts	?
Antibiotic Use Summary	Tables	Charts	?
Antibiotic Duration Summary	Tables	Charts	?
No Prescribing Strategy: URTI	Tables	Charts	?
Delayed Prescription: URTI	Tables	Charts	?
Antibiotics with a Higher Risk of Clostridium difficile Infection	Tables	Charts	?

Close Form

A tabular and graphical version is available for each report by clicking the 'Tables' or 'Charts' button respectively. Further information about the reports can be found by clicking the '?' button.

Reports can be run at

(a) Prescriber Level (default)

To run a prescriber level report:

- Select 'Start Date' and 'End Date' for the period during which data were collected using the date pickers
- Select 'Prescriber Name'
- Select the Prescriber Level Report to be run by choosing 'Tables' or 'Charts'

(b) Practice Level

To run a practice level report:

- Uncheck the 'Prescriber Level Report' button

The following screen will appear:

Reports

Tick the box for a Prescriber Level Report (default) or untick the box for a Practice Level Report.

Prescriber Level Report ☒ ?

Enter the Start Date and End Date of the Reporting Period using the date picker

Start Date End Date

Choose Practice Level Report

?	Consultation Summary	Tables	Charts
?	Antibiotic Use Summary	Tables	Charts
?	Antibiotic Duration Summary	Tables	Charts
?	No Prescribing Strategy: URTI	Tables	Charts
?	Delayed Prescription: URTI	Tables	Charts
?	Antibiotics with a Higher Risk of Clostridium difficile Infection	Tables	Charts

- Select the 'Start Date' and 'End Date' for the period during which data were collected using the date picker
- Select the Practice Level Report to be run by choosing 'Tables' or 'Charts'

When all reports have been run click 'Close Form' to return to the Main Menu

6 Report Types

There are six reports available:

(a) Consultation Summary

The report provides a summary of all consultations relating to acute infection that took place between the specified start date and end date and includes a breakdown of all consultations by Age and Infection Type.

The report summarises the number of consultations that resulted in the issue of a prescription. Consultations that resulted in the issue of a prescription are broken down by Indication for Treatment and Prescribing Method. The information on indication for treatment may be useful in interpretation of compliance with recommendations in local prescribing policies. Prescribing of antibiotics following telephone assessment should be limited to exceptional cases.

(b) Antibiotics Summary

The aim of antibiotic prescribing policies is to provide recommendations for the empirical treatment of commonly encountered infections to promote, safe, effective and economic use of antibiotics and to minimise the emergence of bacterial resistance. The report provides a summary of antibiotic prescribing for all consultations that resulted in the issue of a prescription between the specified Start Date and End Date and includes a breakdown of antibiotic use by Infection Type. This information should be interpreted in the context of local prescribing policies to identify areas for quality improvement.

(c) Antibiotic Duration Summary

Prescribing policies usually provide advice on the drug dose and duration for empirical treatment with antibiotics. The report provides a summary of antibiotic duration for all consultations that resulted in the issue of a prescription between the specified Start Date and End Date and includes a breakdown of antibiotic duration by Infection Type. This information may be useful in interpretation of compliance with recommendations in local prescribing policies.

(d) No Prescribing Strategy: Upper Respiratory Tract Infections

Prescribing guidance advises that antibiotics should only be prescribed when there is likely to be a clear clinical benefit and a no antibiotic strategy should be considered for acute self limiting upper respiratory tract infections. The report provides the number and proportion of consultations for upper respiratory tract infections (Acute Cough / Bronchitis, Otitis Media, Pharyngitis / Sore Throat / Tonsillitis and Rhinosinusitis) which did not result in a prescription for antibiotics between the specified Start Date and End Date.

(e) Delayed Prescriptions: Upper Respiratory Tract Infections

A delayed prescription strategy is recommended as an option for acute self limiting upper respiratory tract infections. The report provides a summary of consultations that resulted in a delayed prescription being issued for upper respiratory tract infections (Acute Cough / Bronchitis, Otitis Media, Pharyngitis / Sore Throat / Tonsillitis and Rhinosinusitis) between the specified Start Date and End Date.

(f) Antibiotics with a higher Risk of Clostridium difficile Infection

Antibiotic prescribing policies are intended to support a reduction in the use of antibiotics such as co-amoxiclav, ciprofloxacin and cephalosporins that are associated with a greater increased risk of CDI. The report provides a summary of infections treated using agents with a high risk of CDI between the specified Start Date and End Date. This information will enable prescribers to understand which infections have been treated using higher risk antibiotics. This information should be interpreted in the context of local prescribing policies to assess the appropriateness of this prescribing.

7 Printing Reports

Reports open in 'Print Preview' mode:

Access 2003

Print **Close**

Prescriber: Consultation Summary Reporting Period 06-Jun-12 30-Jun-12
Prescriber doctor

Total Number of Consultations		
	14	

Age	Number of Consultations	Percentage of Consultations
0-4 years	1	7
5-14 years	2	14
15-29 years	2	14
30-44 years	2	14
45-59 years	3	21
60-74 years	2	14
75+ years	2	14

Infection Type	Number of Consultations	Percentage of Consultations
Acute Cough/Bronchitis	4	29
Cellulitis	1	7
Community Acquired Pneumonia	2	14
Impetigo	1	7
Other	1	7
Otitis Media	1	7
Pharyngitis / Sore Throat / Tonsillitis	1	7
Rhinosinusitis	1	7

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Access 2007

Print **Close**

Prescriber: Consultation Summary Reporting Period 01-Jan-11 31-Jan-12
Prescriber Andrea

Total Number of Consultations		
	18	

Age	Number of Consultations	Percentage of Consultations
0-4 years	4	22
5-14 years	6	33
15-29 years	7	39
30-44 years	6	33
45-59 years	1	6
60-74 years	1	6
75+ years	1	6

Infection Type	Number of Consultations	Percentage of Consultations
Acute Cough / Bronchitis	5	28
Cellulitis	1	6
Chronic Obstructive Pulmonary Disease Acute Exacerbation	2	11
Community Acquired Pneumonia	1	6
Impetigo	1	6
Otitis Media	1	6
Pharyngitis / Sore Throat / Tonsillitis	1	6

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The report can be printed by clicking the 'Print' button on the top left of the screen or closed by clicking the 'Close Print Preview' button on the top right of the screen.

8 Exit Audit Tool

To close the application, click the 'Exit Audit Tool' button.

Scottish Antimicrobial Prescribing Group
Primary Care Management of Infection Audit Tool
Data Collection Form

Patient CHI _____

Database ID _____

Prescriber Name _____

 Patient Age ☐ 0-4 ☐ 5-14 ☐ 15-29 ☐ 30-44 ☐ 45-59 ☐ 60-74 ☐ 75+

Consultation Date _____

Infection Type

- ☐ Acute Cough / Bronchitis
☐ Cellulitis
☐ Chronic Obstructive Pulmonary Disease Acute Exacerbation
☐ Community Acquired Pneumonia
☐ Impetigo
☐ Otitis Media
☐ Pharyngitis / Sore Throat / Tonsillitis
☐ Pyelonephritis, acute
☐ Rhinosinusitis
☐ Urinary Tract Infection, Uncomplicated (Female)
☐ Urinary Tract Infection, Uncomplicated (Male)
☐ Other

Antibiotic

- ☐ No antibiotic prescribed
☐ Amoxicillin
☐ Azithromycin
☐ Cefaclor
☐ Cefalexin
☐ Cefradine
☐ Cefuroxime
☐ Ciprofloxacin
☐ Clarithromycin
☐ Co-amoxiclav
☐ Doxycycline
☐ Erythromycin
☐ Flucloxacillin
☐ Metronidazole
☐ Nitrofurantoin
☐ Phenoxymethylpenicillin
☐ Trimethoprim
☐ Other
☐ Dual Therapy

Duration of Treatment

- ☐ 3 days
☐ 5 days
☐ 7 days
☐ 10 days
☐ >10 days
☐ Other

Delayed Prescription

- ☐ Yes
☐ No

Indication for Treatment

- ☐ Empirical treatment, first agent used
☐ Empirical treatment, second or subsequent agent
☐ Microbiologically confirmed infection, first agent used
☐ Microbiologically confirmed infection, second agent used

Prescribing Method

- ☐ Face to face consultation
☐ Telephone request from patient
☐ Following receipt of laboratory information